

IN THE CLAIMS:

1. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a gate electrode over a substrate;

forming a gate insulating film over the gate electrode;

forming a semiconductor film over the gate insulating film;

covering a region to become a channel formation region of said semiconductor film with a first mask;

doping a trivalent or pentavalent impurity element to a region to become a source region and a region to become a drain region of said semiconductor film ~~with a trivalent or pentavalent impurity element~~; and

covering a first portion of the first mask and ~~one~~ of a portion of the region to become the source region [[and]] ~~or~~ a portion of the region to become the drain region with a second mask,

wherein a second portion of the first mask and the other one of the region to become the source region and the region to become the drain region [[is]] ~~are~~ not covered with the second mask.

2. (Cancel).

3. (Previously Presented) A method according to claim 1 wherein contaminants on a surface of the substrate on which said semiconductor film is to be formed are reduced using active hydrogen or a hydride.

4. (Original) A method according to claim 1 further comprising the step of forming a multi-layer film including a silicon nitride film as any of the layers as said gate insulating film.

5. (Original) A method according to claim 1 further comprising the step of forming a multi-layer film including benzocyclobutene as a part of said gate insulating film.

6. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a gate electrode over a substrate;

forming a gate insulating film over the gate electrode;

forming a semiconductor film over the gate insulating film;

forming an insulating film over the semiconductor film;

crystallizing said semiconductor film by irradiating it with infrared light or ultraviolet light through said insulating film to form a crystalline semiconductor film; and

covering a region to become a channel formation region of said crystalline semiconductor film with a first mask;

doping a trivalent or pentavalent impurity element to a region to become a source region and a region to become a drain region of said crystalline semiconductor film ~~with-a trivalent or pentavalent impurity element~~ through said insulating film;

covering a first portion of the first mask and ~~one~~~~of~~ a portion of the region to become the source region [[and]] ~~or-a portion of~~ the region to become the drain region with a second mask; and

forming an interlayer insulating film over the first mask and the second mask,

wherein a second portion of the first mask and the other one of the region to become the source region and the region to become the drain region [[is]] ~~are~~ not covered with the second mask.

7. (Previously Presented) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film, said initial semiconductor film and said insulating film are formed using different chambers.

8. (Previously Presented) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film, said semiconductor film and said insulating film are formed using the same chamber.

9. (Previously Presented) A method for manufacturing a semiconductor device according to claim 6 wherein said gate insulating film and said insulating film are formed

using a first chamber and wherein said semiconductor film is formed using a second chamber.

10. (Previously Presented) A method according to claim 6 further comprising the step of retaining a catalytic element for promoting the crystallization of silicon in contact with the surface of said semiconductor film or within said film after said step of forming the gate insulating film and the semiconductor film.

11. (Previously Presented) A method according to claim 6 wherein contaminants on a surface of the substrate on which said initial semiconductor film is to be formed are reduced using active hydrogen or a hydride.

12. (Original) A method according to claim 6 further comprising the step of forming a multi-layer film including a silicon nitride film as any of the layers as said gate insulating film.

13. (Original) A method according to claim 6 further comprising the step of forming a multi-layer film including benzocyclobutene as a part of said gate insulating film.

14. (Previously Presented) A method according to claim 1, wherein the second mask includes a material selected from a group consisting of a positive type photosensitive organic material or negative type photosensitive organic material, organic resin, a silicon oxide, a silicon nitride and silicon nitride oxide.

15. (Previously Presented) A method according to claim 6, wherein the second mask includes a material selected from a group consisting of a positive type photosensitive organic material or negative type photosensitive organic material, organic resin, a silicon oxide, a silicon nitride and silicon nitride oxide.

16. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film over a substrate;
covering a portion of a region to become a channel formation region of the semiconductor film and one of a portion of a region to become a source region a portion of a region to become a drain region of the semiconductor film with a first mask;
doping a trivalent or pentavalent impurity element to [[the]] a region to become [[the]] a source region and [[the]] a region to become [[the]] a drain region of the semiconductor film with a trivalent or pentavalent impurity element; and
covering a first portion of the first mask and a portion of the region to become the source region or the region to become the drain region with a second mask,
forming an interlayer insulating film over the second mask,
wherein a second portion of the first mask and the other one of the region to become the source region and the region to become the drain region [[is]] are not covered with the second mask.

17. (Previously Presented) A method according to claim 16, further comprising the step of forming an insulating film over the semiconductor film.

18. (Currently Amended) A method according to claim 16, wherein the second mask includes a material selected from a group consisting of a positive type photosensitive organic material or negative type photosensitive organic material, organic resin, a silicon oxide, a silicon nitride and silicon nitride oxide.